Investigating Where Students Get Their Information About Science

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Introduction

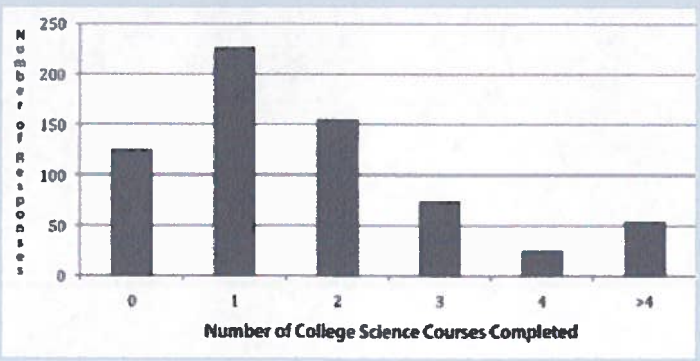
As educators and outreach professionals, we spend our careers trying to influence students' and the public's understandings about science as well as influence attitudes toward science and technology. The National Science Foundation is deeply invested in knowing more about where members of the public get their information about science and publishes its findings in the biennial National Science Board Report *Science and Engineering Indicators* (NSB, 2012). Little research has been conducted to investigate this topic with undergraduate non-science major students specifically. Aside from instructors' experience, little is known or documented about where students get information about science or what sources of information they find credible in informing their understandings about science.

The Survey

Data was collected through an online survey, which included both open-ended and forced choice questions asking students to report their interest, understanding and engagement in science and technology and STEM related activities. The survey was completed by 660 undergraduate students enrolled in introductory astronomy courses as the University of Arizona during the spring of 2012. 91% of participants were traditional college aged students (18-22 years of age), 44% were male and 56% were female.

Not surprisingly, completion of more college science courses was related to a stronger reported interest in science overall. Those who reported having completed four or more science courses also reported the greatest interest in science. Additionally, those who reported having completed more college science courses were more likely to report greater knowledge about science in general

When asked how their interest in science has changed over time, 53% of students reported that is had increased, 36% reported that it stayed the same, and 12% reported that it had decreased since the middle of high school.



Sources of Science Knowledge

In their open-ended responses, a majority of respondents (58%) reported the Internet as the first place they used when they wanted to learn about a topic in science (8% mentioned Wikipedia specifically). Fewer (46%) students reported consulting knowledgeable people (professors, parents and friends) and less than 2% would look in a book. More than 70% of respondents reported getting most of their information about science online, 40% reported getting it from their courses, and 7% reported getting information from books and TV.

When asked to judge the importance of different resources in informing them about science, teachers were reported as the most important source (90%), followed by the Internet (80%), Wikipedia in particular (50%), TV shows (60%), books and magazines (50%), and science centers (50%). Scientists, professors and scientific journals were reported as the most reliable sources of scientific information. (The charted results appear on the next page.)

Future Work

We will be conducting individual interviews with students to gain greater insight into their understanding about science. Additionally we will pair their responses with how they answer the open-ended question: "What does it mean to study something scientifically?"

Acknowledgements

This material is based in part upon work supported by the National Science Foundation under Grant No. 0715517, a CCLI Phase III Grant for the Collaboration of Astronomy Teaching Scholars (CATS). Any opinions, findings, and conclusions or recommendations expressed in this material are those of the authors and do not necessarily reflect the views of the National Science Foundation.

We would also like to thank Michael Greene and the NASA JPL Exoplanet Exploration Program (ExEP) for the continued support of the research, professional development, and curriculum development efforts of the Center for Astronomy Education (CAE) and our broader CAE community. [RETURN]

COMMUNICATING SCIENCE

How interested are you in:		Not at all interested	A little interested	Moderately interested	Very interested
Science in general (n=659)	N	236	196	150	78
	%	36%	30%	23%	12%
Technology in general (n=659)	N	22	120	285	232
	%	3%	18%	43%	35%
Astronomy (n=658)	N	35	139	274	210
	%	5%	21%	42%	32%
The Space Program (n=657)	N	70	193	233	161
	%	11%	29%	35%	24%
Computers and information technology (n=660)	N	95	199	233	133
	%	14%	30%	35%	20%
Physics (n=660)	N	236	196	150	78
	%	36%	30%	23%	12%
Biology (n=655)	N	156	265	168	66
	%	24%	40%	26%	10%
Chemistry (n=659)	N	233	250	137	39
	%	35%	38%	21%	6%
Geology (n=659)	N	194	257	165	43
	%	29%	39%	25%	7%
Environment Science (n=653)	N	130	248	203	72
	%	20%	38%	31%	11%

		Not at all	A little	Moderately	Very
How knowledgeable are you about science in general? (n=659)	N	11	191	399	58
	%	2%	29%	61%	9%
How well informed are you about recent scientific advances? (n=659)	N	79	327	217	36
	%	12%	50%	33%	6%
How important is science for your likely career path? (n=657)	N	184	236	146	91
	%	28%	36%	22%	14%

In the past year roughly how many times have you:	> 10 times	6-10 times	3-5 times	1-2 times	none
Been to a science center or museum, nature center, or planetarium (n=656)	41	73	146	288	108
	6%	11%	22%	44%	16%
Watched a science show on TV (n=657)	203	133	157	124	40
	31%	20%	24%	19%	6%
Watched a movie that was about science (n=655)	113	124	193	186	39
	17%	19%	30%	28%	6%
Read a science story in a printed newspaper or magazine (655)	104	110	201	183	57
	16%	17%	31%	28%	9%
Read a book (not a textbook) about science (n=655)	32	53	90	219	261
	5%	8%	14%	33%	40%
Read about science or watched a science video anywhere on the Internet (n=652)	196	143	156	136	21
	30%	22%	24%	21%	3%
Read about science on the Wikipedia web site (n=649)	177	126	154	129	63
	27%	19%	24%	20%	10%
Talked to a scientist or science teacher about a science topic of interest to you (n=656)	70	77	127	211	171
	11%	12%	19%	32%	26%